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CAULIFLOWER

★ *By John Mosbell*

Last year Mr. Mosbell Visited Denmark and Made a Personal Inspection of the Seed Growing Activities of E. Suhr Company at Amager, Where They Grow Vast Acres of Cauliflower for Seed.

AS IS generally known, most of the cauliflower seed used in this country, is being imported from northern Europe—mainly from Denmark. For this reason, it is with a great deal of pleasure that the writer avails himself of the opportunity to give a short resume of the commercial seed production of this most delicate product, hoping that it will interest the readers of SEED WORLD and at the same time, stimulate the increasing interest in the United States of this most worthwhile vegetable.

Considering the fact that cauliflower is easily crossed with other crucifers, one must bear in mind the importance of proper isolation from other related cultures, in order to avoid cross-pollination or inter-crossing.

The perfectly developed seed plant attains a height of about 35 inches. Properly matured seed should have a soil test germination of 85 to 90 per cent and the proper time allowed for checking vitality of the seed should be six to seven days.

Needs Mild Seaboard Climate

The production of cauliflower seed requires a mild seaboard climate—preferably with a temperature of not over 20 degrees Celcius (68 degrees Fahrenheit) during the flowering period and where weather conditions are preferably changing with sun and rain. The flowering stage will suffer if the weather is too hot and dry. For this reason, the exceptionally fine results obtained with this most delicate culture are typical for the Kingdom of Denmark—with its many islands, where the weather conditions—especially on the small Island of Amager, near Copenhagen, have some of the best possibilities in the world, for

the production of superior cauliflower products.

In Denmark, cauliflower for seed production, is sown in cold frames (Fig. 1) the first part of September, using about 20 grams (a little over ½ ounce) per window. In order to avoid "black leg" care must be taken not to sow the seed too thickly, and the soil must be thoroughly formalin-treated in plenty of time before sowing. A sandy well prepared loam is needed and as much air as the weather conditions permit, is allowed.

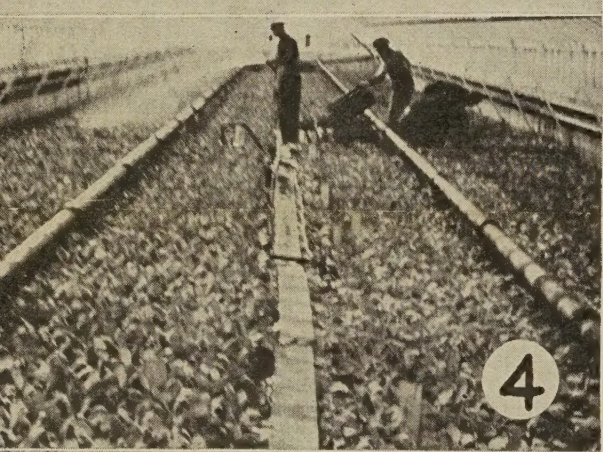
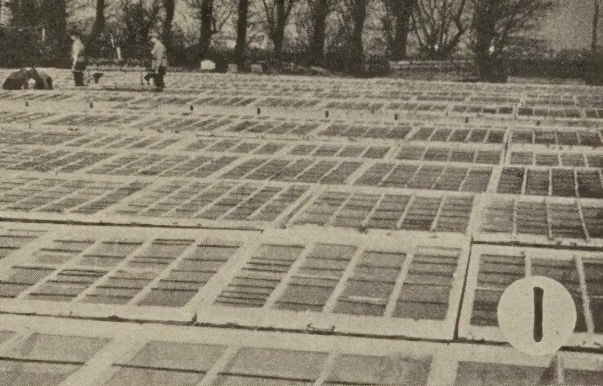
As soon as the plants are large enough (Fig. 2), they are transplanted into 5 cm. (about two-inch) pots and transferred to frost-free greenhouses. Here they undergo a more or less dormant period and are given very little watering—if possible, none at all. Unusual care must be exercised at all times, especially as to airing.

During the first part of February, the cauliflower plants are again transplanted (Fig. 3) this time into six-inch pots.

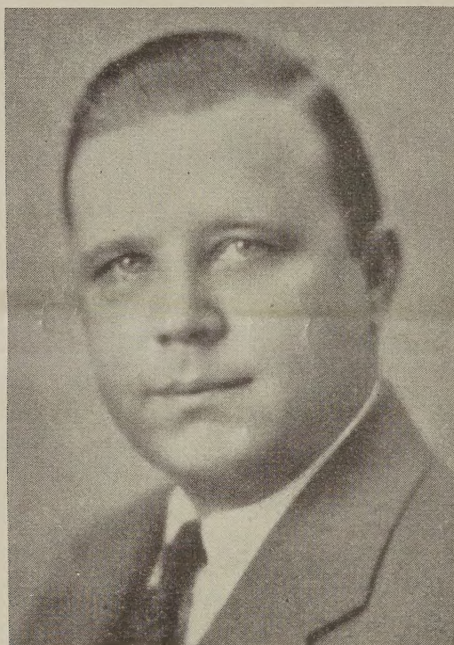
Forcing begins very slowly. (Fig. 4.) To begin with, only very little air and water are given. This is increased later and gradually when plants have obtained the proper size, they are again transferred to cold frames, (Fig. 5) in order that they may here develop fully, prior to the final transfer to the field.

Towards the latter part of April or first of May, when there is a reasonable assurance of frost-free nights, the plants are transplanted into the fields, great care being exercised not to disturb the mother soil attached to their roots. The average spacing between plants is about 30 inches, both ways.

In order to produce cauliflower seed successfully, a mild sandy loam is re-



SEED *Grown in* DENMARK



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quired, and this should be well manured (but not freshly manured) and well cultivated. It is also important that the climatic conditions are such that there is reasonable assurance that night frosts in the late spring and early fall will not be experienced. It is also necessary that the cauliflower seed grower is, at all times, in a position to control irrigation of the fields, as it is most important that the plants have plenty of moisture—especially up to the time of the proper maturity of the heads.

Rogueing Is Important

Next comes one of the most important steps in this complicated growing process—namely, the rogueing. (Fig. 6.) Each field is inspected daily by experts, and all heads not absolutely true to type are removed from the field immediately. Any plants that have not headed by this time, about July 15 to 20, must be removed from the fields, as the interval before harvest time will not allow such plants to properly produce seed. Shortly after the rogueing, the very important selection of stock seed takes place. This selection is made most critically. Only the very best shaped, white heads having a firm center—with evenly distributed outside seed stalks are acceptable. (Fig. 7.) Each such super-plant is marked with proper identification and protected by a gauze-covered frame. In this way, the seed is kept under utmost control during the final stages of the growing process.

During the last few years, the writer's arrangement with the E. Suhr Co.

E. Suhr Co., New York City

on the island of Amager has been based on the following novel method:

Seed harvested from each individual stock seed plant is used—with half the amount for seed production and half for production of the ready market product. Thousands of crates are shipped to the city market in Copenhagen and to various parts of the country. Some is exported to other parts of Scandinavia. The grading of this latter half is extremely critical and should a particular number not give from 90 to 100 per cent of No. 1 heads, the plants of the corresponding number in the field for seed production are immediately destroyed. This utmost effective means of control, while tedious and expensive, assures 100 per cent purity in seed production.

In order to keep destructive birds away, young boys are employed to cover the fields with various noise-making devices. The plants are sprayed whenever necessary. (Fig. 8.)

In order to protect the plants against night frosts that may occur in September and do untold damage, it is necessary to have ready for immediate use smudge pots of large calibre which are located at strategic points throughout the plantings.

The seeds usually mature during the first part of October. This is indicated by the pods turning yellow, while the seeds become brown and solid. Care is exercised not to harvest the seeds too early as a shrinky seed of low germination and light color would be the result. Harvesting takes place as the seed matures and the entire plant is carefully cut and transferred to properly built curing-houses.

About the 20th of October, the field is clean. In due time, threshing takes place and after this, the cleaning process. Cleaning is followed by the final drying which is done by placing the seed in copper-wired bottom frames, each about 3x6 feet, and by proper stirring. Natural factors, sun and air, are employed. Samples of the product are then drawn by the Danish Government Seed Control and upon acceptance by this authority, the seed is bagged and made ready for shipment to the United States.

